

CLAIMS

What is claimed is:

1. A organic light emitting diode (OLED) display
5 consisting of a plurality of pixels, each pixel emitting light
in one of a plurality of colors, comprising:
a lower electrode layer;
a photo-resist layer, said photo-resist layer fabricated
upon said lower electrode layer, said photo-resist layer having
10 a height of less than or equal to three microns, said photo-
resist layer patterned into a plurality of banks to define
pockets upon said lower electrode layer, each pocket defining
the active region of each of said pixels;
a plurality of polymer layers, said polymer layers formed
15 by dropping a liquid substance into each of said defined pockets
and allowing said substance to dry therein; and
an upper electrode layer patterned above said polymer
layers, said upper and lower electrode layers conducting
electrical energy to said polymer layers causing at least one of
20 said polymer layers to emit light thereby.

2. A display according to claim 1 wherein said liquid
substance includes at least partially organic materials.

3. A display according to claim 2 wherein said polymer layers include:

a conducting polymer layer which aid in the transport of electrical energy; and

5 a emitting polymer layer emitting light in one of said colors upon activation by said electrical energy.

4. A display according to claim 3 wherein said colors includes white, red, green and blue colors.

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5. A display according to claim 1 wherein the height of the photo-resist banks depends in part upon the amount of substance to be deposited in each pocket.

15 6. A display according to claim 1 wherein said substance when dried has a substantially flat and substantially uniform profile.

7. A display according to claim 3 wherein said lower
20 electrode layer is an anode layer and said upper electrode layer is a cathode layer.

8. A method of fabricating an organic electronic device, said method comprising:

patterning a lower conducting layer upon a substrate;

fabricating a photo-resist layer upon said lower electrode layer, said photo-resist layer having a height of not more than three microns, said photo-resist layer patterned into banks to
5 define pockets upon said lower electrode layer, each pocket defining the active region of each of said pixels; and

depositing at least one liquid substance into each said pocket, said liquid substance allowed to dry into layers composed of organic materials.

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9. A method according to claim 8 wherein said organic electronic device is an organic light emitting diode (OLED) display.

15 10. A method according to claim 9 wherein each said pocket defines at least one of a pixel and a sub-pixel of said display.

11. A method according to claim 10 wherein said liquid
20 substance includes an emissive polymer, said emissive polymer emitting light upon application of electrical energy thereto, said layers including thereby an emissive polymer layer.

12. A method according to claim 11 further comprising:

fabricating an upper conducting layer above said dried film layers, said upper conducting layer and said lower conducting layer conducting electrical energy to said emissive polymer layer.

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13. A method according to claim 12 wherein said at least one liquid substance also includes an additional conducting polymer, said conducting polymer substance allowed to dry into a conducting polymer layer, said conducting polymer layer an
10 additional layer of said layers of organic materials and disposed upon said emissive polymer layer.

14. A method according to claim 8 wherein said substance when dried has a substantially flat and substantially uniform
15 profile.